

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number  
WO 2005/042184 A1

(51) International Patent Classification<sup>7</sup>: B22D 11/06,  
11/118

S.p.A., Via di Castel Romano 100-102, I-00129 Roma  
(IT).

(21) International Application Number:  
PCT/IT2003/000708

(74) Agents: LEONE, Marlo et al.; c/o Società Italiana  
Brevetti S.p.A., Piazza di Pietra, 39, I-00186 Roma (IT).

(22) International Filing Date: 31 October 2003 (31.10.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,  
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,  
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,  
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,  
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: Italian

(26) Publication Language: English

(71) Applicants (*for all designated States except US*):  
THYSSENKRUPP ACCIAI SPECIALI TERNI  
S.P.A. [IT/IT]; Viale B. Brin 218, I-05100 Terni (IT).  
THYSSENKRUPP NIROSTA GMBH [DE/DE]; Ober-  
schlesienstrasse 16, D-47807 Krefeld (DE).

(84) Designated States (*regional*): ARIPO patent (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,  
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

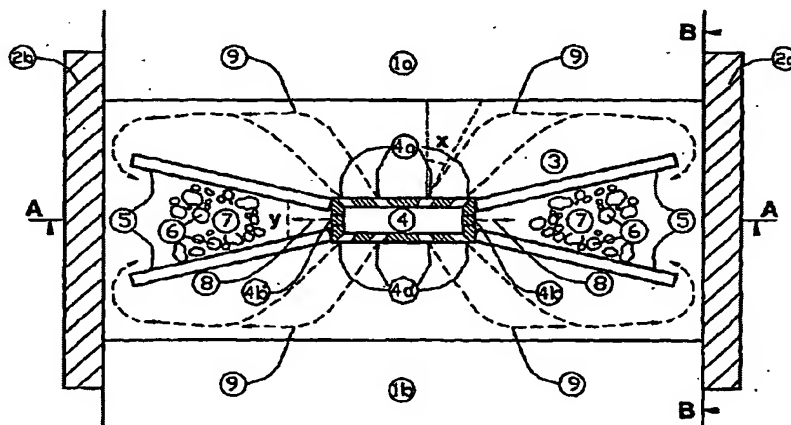
(75) Inventors/Applicants (*for US only*): CAPOTOSTI,  
Romeo [IT/IT]; c/o Thyssenkrupp Acciai Speciali Terni  
S.P.A., Viale B. Brin 218, I-05100 Terni (IT). TONELLI,  
Riccardo [IT/IT]; c/o Centro Sviluppo Materiali S.p.A.,  
Via di Castel Romano 100-102, I-00129 Roma (IT).  
MACCI, Franco [IT/IT]; c/o Centro Sviluppo Materiali

Published:

— with international search report

[Continued on next page]

(54) Title: APPARATUS FOR CONFINING THE IMPURITIES OF A MOLTEN METAL CONTAINED INTO A CONTINUOUS  
CASTING MOULD



(57) Abstract: Apparatus for confining the impurities in a molten metal fed by means of a discharger and contained into an area (3) of a strip continuous casting mould delimited by the side surfaces of two casting rolls with counter-rotating horizontal axis (1a, 1b) and by two containment side plates (2a, 2b) positioned in contact with the rolls' bases, comprising: a discharger (4) having at least two first series of holes (4a, 4a') for the molten metal supply, each series being formed by at least a pair of holes respectively directed towards one of the opposed side surfaces of the two rolls (1a, 1b) and at least a second pair of holes (4b, 4b') for the molten metal supply, each hole of such second pair being directed towards the side plate nearest thereto, and said at least one second pair of holes (4b, 4b') being positioned at a greater depth with respect to said two first series of holes (4a, 4a'); at least two pairs of barriers (5) present in one part of the area (3) comprised between the end of the plunger and the containment side plates (2a, 2b), forming the cross-sections of said barriers therebetween, lying on a same horizontal plane, an Y angle.

BEST AVAILABLE COPY

WO 2005/042184 A1